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ABSTRACT

Participation in organizational decisions is thought to have a number of positive effects on performance and worker attitudes, but it is not clear which elements of participation are responsible for these positive effects. The effects of two elements of participation, upward information input by the worker and the provision of downward knowledge by a supervisor, were examined in a laboratory setting. Thirty-eight male and 49 female undergraduates worked on a task under a performance evaluation procedure that either did or did not allow them to offer information about their performance to an evaluator. A supervisor either did or did not offer information about criteria for evaluation of performance. The subject received either a positive or negative outcome from the evaluation procedure. Upward information flow and downward information flow interacted in their effect on task performance, with highest performance occurring under high upward and high downward information exchange. Performance on a subsequent task increased following downward information on the first task. Upward information flow produced higher ratings of procedural fairness, satisfaction with outcomes, and satisfaction with the supervisor. The results are discussed in terms of their implications for participatory effects and their implications for the design of organizational performance appraisal procedures. (Author)

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Information Exchange in Evaluation Procedures:
The Effects of Input and Knowledge on Performance and Attitudes

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Running head: INFORMATION EXCHANGE IN EVALUATION

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Abstract

Participation in organizational decisions is thought to have a number of positive effects on performance and worker attitudes, but it is not clear which elements of participation are responsible for these positive effects. The effects of two elements of participation, upward information input by the worker and the provision of downward knowledge by a supervisor, were examined in a laboratory setting. 38 male and 49 female undergraduates worked on a task under a performance evaluation procedure that either did or did not allow them to offer information about their performance to an evaluator. A supervisor either did or did not offer information about criteria for evaluation of performance. The subject received either a positive or negative outcome from the evaluation procedure. Upward information flow and downward information flow interacted in their effect on task performance, with highest performance occurring under high upward and high downward information exchange. Performance on a subsequent task increased following downward information on the first task. Upward information flow produced higher ratings of procedural fairness, satisfaction with outcomes, and satisfaction with the supervisor. The results are discussed in terms of their implications for participatory effects and their implications for the design of organizational performance appraisal procedures.

Information exchange in evaluation procedures: The effects
of input and knowledge on performance and attitudes

Continuing interest in employee participation in decision-making has generated a substantial literature on the effects of participation on work-related attitudes and performance (see Locke and Schweiger, 1979). However, researchers investigating the effects of participation in organizational settings frequently have employed vastly different operationalizations of the participation construct, making it difficult to identify what features of participation are responsible for what beneficial psychological and behavioral effects. In addition, researchers in different areas have focused on different consequences of participation, and there exists little information on the relations among the various effects of specific participatory strategies on performance satisfaction, procedural satisfaction and actual task performance.

Research on the efficacy of assigned versus participatory goal-setting techniques suggests that increased participation promotes task satisfaction and may lead to enhanced performance motivation (Coch and French, 1948; Latham and Yukl, 1975; Locke and Schweiger, 1979). In these studies, a key element of the participation operationalization included an opportunity for the individual to influence the superior's decision about the performance criterion to be established.

As suggested by Lawler (1967), participatory procedures may also facilitate task attitudes and performance through their

influence on perceptions of the fairness of the evaluation procedure. While the exact mechanisms by which affective responses to the evaluation process per se are related to work performance have not been well researched, Landy and his colleagues (Landy, Barnes & Murphy, 1978; Landy, Barnes-Farrell & Cleveland, 1980) have suggested that perceptions of fairness in the evaluation procedure may enhance subsequent task performance through their effects on goal acceptance. Research by Thibaut and Walker (1975; 1978), in judicial settings, provides strong evidence that judgments of procedural fairness are affected by the individual's perception of an opportunity to develop the court case and present evidence to the judge or jury. Recent studies by Folger (1977), in non-legal settings, and others (Dibpoye and dePontbriand, 1981), in the context of performance appraisal, provide additional evidence to indicate that the opportunity to express one's opinions or provide input to a decision leads to increased perceptions of procedural fairness and satisfaction with superiors. As in the research in the goal-setting literature, investigations of procedural fairness have focused primarily on the upward flow of information from a subordinate or interested party to a decision-maker prior to evaluation by the decision-maker. Unlike the research in goal-setting, however, most investigations in the procedural fairness literature do not examine the effects of participation on subsequent performance or willingness to use the procedure again.

Both Lewin (1951) and Locke, Shaw, Saari and Latham (1981) have suggested that a key component contributing to the effectiveness of participative decision-making procedures may be the increase in task knowledge and understanding provided to the individual in the participatory process. Assuming that most participatory procedures in work settings involve some interaction between a superior and the worker, one can distinguish between decision-making procedures that permit or facilitate upward, downward, or bidirectional flows of information exchange. As noted previously, the manipulation of participation in previous goal-setting and procedural fairness investigations typically involves manipulating the upward flow of information. In contrast, the provision of task-relevant information or knowledge is most likely to occur as a result of the downward flow of information from the superior to the worker, for example when a supervisor clarifies a task or the methods by which a goal can be achieved. As Lewin and Locke et al. suggest, the inconsistency of previous findings with respect to the effects of participatory strategies on subsequent performance motivation may be due to inter-study variations in the extent to which a downward flow of information occurs in the participatory process.

According to the procedural fairness literature, the provision of an upward flow of information exchange should exert its' major effect on perceptions of procedural fairness and outcome satisfaction. The provision of task-specific information (downward

information exchange only) should increase task clarity and thus enhance performance efforts. Where only downward information transfer exists, however, the advantage of increased task clarity may be offset by what has been similarly obtained and termed a "frustration" effect in the procedural fairness literature (Folger, 1977). Provision of specific task information without an opportunity to influence the decision is predicted to make the individual's lack of influence opportunity more salient and so strengthen perceptions of procedural unfairness. Perceptions of unfairness may reduce behavioral commitment to the task and so could reduce subsequent performance motivation despite greater task clarity. Since bidirectional information exchange would provide the individual with both greater task clarity and with an opportunity to influence the decision, performance motivation would be predicted to be highest in this condition.

Latham and Saari (1979) also suggest that participatory procedures may gain their motivational benefits by increasing perceptions of supervisor supportiveness. They suggest that supervisor supportiveness may increase an individual's confidence to set higher goals, leading to subsequent increments in performance effort. While supervisor supportiveness may be achieved in a variety of ways, the provision of downward information exchange is very likely to enhance the individual's perceptions of supervisor concern and interest.

Laboratory investigations of participation in goal-setting

frequently provide the subject with influence opportunity via direct communication with the decision-maker. In these instances, the opportunity to exert influence may be easily confounded with subjects' perceptions of the interpersonal interaction in which the influence attempt is embedded. Favorable responses to participatory strategies incorporating upward information exchange could thus result from self-generated feedback, from the perception of verbal and nonverbal cues, that is unrelated to the actual opportunity to exert influence. To minimize the possibility of this confound, the present study manipulated the opportunity to exert influence without providing direct interaction with the decision-maker. Subjects responded to an intermediary who indicated that he or she would or would not directly transmit the subject's communications to the evaluator.

The present study explored the influence of information exchange in participatory procedures on affective, behavioral and attitudinal responses. To investigate the effects of information directionality, subjects in a laboratory experiment were placed in one of four conditions prior to the first task; 1) high upward (worker to supervisor) information flow, low downward flow, 2) high downward flow, low upward flow, 3) high bidirectional flow, and 4) low downward and low upward flow. To test whether the effects of these procedural manipulations were limited to the case of favorable or unfavorable evaluations, the supposed outcome of the first task evaluation was manipulated orthogonally to the procedure

factors. To investigate the enduring effects of downward information flow, all subjects were provided with an opportunity for upward flow of information on a subsequent task, however only half of the subjects had experienced previous downward information exchange that would indicate supervisor supportiveness. The dependent measures included performance measures on the tasks presented, perceptions of procedural fairness, satisfaction with the supervisor, perceptions of evaluation fairness and willingness to work under the same procedure following the evaluation of performance on the first task.

Method

Subjects. Eighty-seven undergraduate students, 38 male and 49 female, participated in the experiment in partial fulfillment of an introductory psychology course requirement.

Procedure. Six subjects and one experimental confederate participated in each session. Upon arriving at the experiment, subjects were informed that the experiment involved the simulation of a business competition, and that each of them would be assigned one of two roles in two-person work teams. They were told that the first phase of the study involved competition between the teams to see which could generate the best product names and to select the most appropriate media for advertising various products. The subjects were told that each member of the team with the best product names would receive a three-dollar prize.

The subjects then completed a brief pre-experimental questionnaire soliciting demographic and individual difference information. The subjects were assigned to individual experimental rooms in a supposedly random fashion, and were told that their room assignments would determine which team they were on and what their position was on the team. In fact, all subjects received instructions indicating that they were the leader of the team. The role of the other member of the team was always filled by the confederate.

The subjects were informed that the first phase of the simulation involved the creation of names for a number of new consumer products and decisions about the best advertising medium for each product. Subjects were told that the team's performance would be evaluated by an unseen evaluator. Each subject was told that they would be responsible for making media decisions for each of the product names created by the other team member (a confederate). Presentation of the final work product generated by the subject was to be made by an experimental assistant, who would play the role of a supervisor in the simulation. The supervisor was identified as the individual who would serve as an immediate supervisor and who would convey the subject's work to the evaluator. All subjects were then provided with a description of the consumer products and asked to begin to identify appropriate media for each product while the other team member generated product names. After five minutes, subjects were provided over a

one-way intercom with the specific product names, supposedly generated by their teammate. All subjects were supplied with the same set of product names by a confederate.

After subjects received the product names, the supervisor entered the room and enacted the downward information exchange manipulation described below. The supervisor then instructed the subject to write out a series of arguments and justifications in favor of awarding the prize to the subject's team. Subjects were told that their production of arguments would or would not be transmitted to the evaluator, depending on the subject's upward information exchange condition. Subjects were given 10 minutes to write their arguments while the supervisor was out of the room. Subjects then completed a pre-outcome questionnaire while the evaluation was supposedly being completed.

Subjects were then instructed to perform a filler task, unrelated to the business simulation, that involved listing as many uses as possible for five common items (e.g. tire, newspaper). Following completion of this task, subjects were informed of the evaluator's decision on the first task. Subjects were told whether or not they had (positive) or had not (negative) won the prize. Subjects were given a post-outcome questionnaire pertaining to the first business simulation and were then told they would participate in a second business competition. The experimenter informed them that their task in this competition would be to list as many uses as possible for five of the consumer products identified in the

first task. All subjects were told that performance would be evaluated on the basis of the number of uses they produced. It was emphasized that the evaluation process would be similar to the one previously used. Because performance on this task was defined explicitly as the number of uses generated, rather than the quality of the uses, the subjects always supplied the evaluator with all relevant information on their performance. Thus, this task can be thought of as providing high upward information exchange for all subjects. The subjects worked for ten minutes on the third task. After the experimental assistant picked up the task product for supposed evaluation, subjects were asked to complete the final questionnaire. The study was then concluded, subjects were debriefed, and those who had been told they had lost the first competition were paid three dollars.

Independent variables. Subjects were randomly assigned to one of the eight cells in a 2 (high versus low downward information flow) X 2 (high versus low upward information flow) X 2 (favorable versus unfavorable evaluation outcome) complete factorial design.

Subjects in the high downward information flow condition were given specific information by the supervisor about several of the criteria used by the evaluator in deciding which team won the competition. These subjects were told, for example, that the evaluator was especially interested in arguments related to the fit between media choice of product names and consumer target. Subjects in the low downward information flow conditions received a

general statement by the supervisor that gave no specific task-relevant information for producing arguments. These subjects were told, for example, that they should try to win by putting down the arguments they thought would be most appropriate.

As indicated previously, subjects in the high upward information flow conditions were informed that the supervisor would transmit their arguments directly to the evaluator by presenting the subjects' written justifications. Subjects not provided this opportunity (low upward flow) were informed that the arguments were solely for the experimenter's use and that they would not be transmitted to the evaluator. To stress that the arguments would not be seen by the evaluator in this condition, arguments were left in the experimental room until after the outcome was announced.

Subjects in the favorable outcome condition were told that their team had been evaluated most favorably, and they were given their three-dollar prize as soon as the outcome was announced. Subjects in the unfavorable outcome condition were told that they had been evaluated unfavorably and that they would not win the three-dollar prize.

Dependent variables. Performance data were collected for all tasks; 1) the argument production task, 2) the filler task (Household Uses), and 3) the Product Uses task. For the argument production task, each argument made by each subject in favor of their team's product was content coded into one of four categories based on a classification scheme of the type of argument

developed. The four categories of arguments consisted of statements made by the subject directed toward 1) name quality, 2) media choice, 3) advertising campaign, and 4) miscellaneous aspects of the product. Specific arguments within each category were defined and are presented in Table 1. Subjects' arguments were evaluated by two raters blind to the subject's condition. Raters assigned one point to each argument that could be matched to a specific category sub-type. Inter-rater reliability in coding the arguments was .92 across all subjects.

Insert Table 1 about here

Two measures of performance were used to examine argument production; the number of non-redundant, or distinct arguments made and the total number of arguments made. A composite score for the total number of distinct arguments was obtained by adding the number of arguments represented across the four categories (maximum score possible equals 15). The score for the total number of arguments made, including redundant arguments, was obtained by adding all arguments listed by the subject.

Mean performance scores for the Household Uses and Product Uses tasks were obtained by summing the number of uses listed by the subject and dividing this total by the number of stimuli in each task. No attempt was made to assess the quality of responses on these tasks due to the wide variation in the type of acceptable

responses that could be provided (Kanfer and Hulin, 1983).

Attitudinal Measures. Perceptions of procedural fairness, evaluation fairness, and satisfaction with the supervisor were assessed by averaging item scores obtained in a series of 9-point ratings. The items used to form each dependent measure and the inter-item reliabilities, using Cronbach's Alpha for those dependent measures assessed by at least three items and product moment correlations for those measures defined by two items, are presented in Table 2. Willingness to engage in a different task using the same evaluation procedure was assessed following announcement of the outcome on the first task by asking subjects to indicate their preference for a similar or different procedure.

Insert Table 2 about here

Results

Manipulation Checks. Subjects in the high downward exchange condition believed they obtained more information from the supervisor in the argument production task than did subjects in the low downward exchange condition ($F(1,83) = 61.80, p < .05, X_{high} = 6.8$, and $X_{low} = 3.3$ respectively). Subjects in the high upward flow condition reported more opportunity to exert influence on the supervisor and the evaluator compared to those in the low upward flow conditions ($F(1,83) = 8.82, p < .01, X_{high} = 5.8$, and $X_{low} = 4.6$).

respectively). No interactions were obtained on either measure between downward and upward information flow, providing evidence to support the independence of these manipulations.

Performance Measures. Subjects who obtained more information from the supervisor made significantly more non-redundant arguments in the argument production task than did subjects in the low downward flow condition ($F(1,83)=4.49$, $p<.05$, $X_{\text{high}}=4.5$, $X_{\text{low}}=3.8$). A significant downward flow X upward flow interaction effect was also obtained ($F(1,83)=5.70$, $p<.05$) and is shown in Table 3.

Insert Table 3 about here

As predicted, subjects in the high downward flow, high upward flow condition made more distinct arguments than did subjects in all other conditions ($F(1,83) = 33.59$, $p<.01$). No significant effects for downward flow or upward flow were obtained on the total number of arguments made. This finding is not unexpected since the goal of the task, to produce convincing arguments for why the subject's company should be awarded the contract, stressed the quality of arguments rather than quantity of arguments made. A $2 \times 2 \times 2$ analysis of variance was conducted to examine performance on the second business simulation task, the product uses task, in which all subjects were provided with de facto high upward information opportunity. The analysis revealed a significant main effect for previous downward flow from the supervisor on the first task.

Subjects in the previous high downward flow condition listed more products ($F(1,79) = 5.28, p < .05, X_{\text{high}} = 10.0$) than did subjects in the previous low downward flow condition ($X_{\text{low}} = 5.8$). It is important to remember that the information that had been communicated by the supervisor in the first task was specific to the first task objective and was not knowledge that would enhance performance on the second simulation task. Communication from the supervisor on the first task contained task-specific information on how to select effective arguments that would influence the evaluator. In the product uses task the subjects were told that the outcome would depend solely on the number of product uses listed. No other significant effects or interactions were obtained on performance in this task.

No significant effects were obtained on the total number of household uses listed in the filler task. Since this task was unrelated to the performance evaluation procedure, procedural variables were not expected to influence performance on this task.

Attitudinal Measures. Results from 2 X 2 analyses of variance on attitudinal variables measured before the outcome was presented reveal a significant main effect for upward flow on perceptions of procedural fairness ($F(1,83)=9.17, p < .01$) and satisfaction with the supervisor ($F(1,83)=5.03, p < .05$). Consistent with previous research findings, subjects in the high upward flow condition reported enhanced perceptions of procedural fairness ($X_{\text{high}} = 6.3, X_{\text{low}} = 5.0$) and increased satisfaction with the supervisor

($X_{\text{high}} = 6.1$, $X_{\text{low}} = 5.2$) compared to subjects in the low upward flow conditions. A significant main effect for downward exchange was also obtained on satisfaction with the supervisor ($F(1,83) = 4.09$, $p < .05$). Subjects in the high downward flow condition tended to perceive the supervisor more favorably than persons in the low downward flow condition ($X_{\text{high}} = 6.0$, $X_{\text{low}} = 5.2$).

A summary of the results 2 X 2 X 2 analyses of variance on attitudes measured after the evaluation is presented in Table 4. Again, a main effect for upward flow was obtained on

 Insert Table 4 about here

perceptions of procedural fairness. Subjects in the high upward flow condition perceived both the procedure to be more fair ($X_{\text{high}} = 6.2$, $X_{\text{low}} = 3.9$) and the evaluation decision to be more fair ($X_{\text{high}} = 6.2$, $X_{\text{low}} = 5.0$) than did subjects in the low upward flow condition. A significant main effect for downward flow was also obtained on perceptions of evaluation decision fairness, indicating that subjects who received task-relevant information from the supervisor before the evaluation tended to view the evaluation decision as more fair than did subjects who did not receive such information ($X_{\text{high}} = 6.0$, $X_{\text{low}} = 5.2$). The outcome manipulation produced a main effect on both perceptions of procedural and evaluation fairness. This effect, however, was independent of either upward or downward flows. Subjects who received a favorable

outcome perceived both the procedure to be more fair ($X_{\text{favorable}} = 5.6$, $X_{\text{unfavorable}} = 4.4$) and the evaluation to be more fair ($X_{\text{favorable}} = 6.5$, $X_{\text{unfavorable}} = 4.7$) than did subjects who received a negative evaluation. Chi-square analyses on subject willingness to engage in another task under a similar evaluation procedure are presented in Table Five. As shown, subjects in the bidirectional exchange condition were significantly more willing to use the same evaluation procedure than were subjects in the high downward, low upward condition. No difference in willingness to use the evaluation procedure again was demonstrated between subjects in the high and low upward flow conditions when downward flow was held constant at a low level.

 Insert Table 5 about here

In summary, the results obtained on attitudinal measures show that opportunity to provide upward information flow exerted an independent effect on all attitudinal dependent variables both prior to and following the evaluation. Subjects in the high downward flow condition were also more satisfied with the supervisor and the evaluation outcome than were subjects in the low downward flow conditions. However, the provision of specific task-relevant information did not exert a significant influence on perceptions of procedural fairness. Willingness to maintain the evaluation procedure was affected by both downward and upward flow;

subjects who experienced a procedure with high bidirectional information flow were more willing to use a similar procedure on future tasks.

Discussion

The findings obtained in the present study illustrate the effects of information exchange in the context of performance evaluation procedures. Task performance on the first simulation task and willingness to use the evaluation procedure again after the first task was significantly higher in the bidirectional exchange condition compared to the partial and low information exchange conditions. Downward flow of information established in the first task continued to exert a significant influence on performance on a subsequent task in which all subjects were provided an opportunity for upward information exchange.

The pattern of results suggests that the behavioral benefits of participatory procedures derive, at least in part, from information exchange interactions that allow both upward and downward information flow. The continuing influence of previous downward information contradicts the notion that participatory procedures gain their performance benefits by simply increasing immediate task clarity. This finding is, however, consistent with the suggestion by Latham and Saari (1979) that downward exchange processes gain, at least in part, their behavioral benefits by increasing supervisor supportiveness when paired with an

opportunity for high upward information exchange.

An examination of attitudinal measures indicates that the provision of procedural components to facilitate information flow from the subject to the supervisor consistently enhanced beliefs about the fairness of the procedure and the resultant outcome. Information flow in both directions led to an increased willingness to participate in another task using a similar evaluation procedure; subjects who were provided with information by their supervisor but who were not allowed to send information to the decision-maker reported less willingness to use the same procedure again.

The present study extends investigations of the capacity of procedural components to enhance performance and satisfaction to a class of previously neglected organizational evaluation procedures. In many organizations, employees perform a task to achieve an organizationally-controlled outcome that cannot be directly mapped onto a single measure of performance but is nonetheless partially dependent on the individual's behavior. Promotions, vacations, special assignments, and other highly valued work-related outcomes are often distributed by an organizational superior who is only generally aware of individual's performance. Typically, the superior will make a decision about the merits of allocating a reward based on information presented by another individual, for example an immediate supervisor, who is familiar with the individual's performance. In this situation, the employee

can not contribute information directly; he/she can, however, exert some influence over the decision process by presenting information to the supervisor. Line workers may, for example, attempt to influence the decision to grant a special assignment by informing the supervisor of his/her performance accomplishments relevant to achieving a favorable outcome. The results obtained in this study suggest that the provision of a upward flow of information, from worker to supervisor, produces positive attitudinal effects. Previous researchers have assumed that the positive influence of information input on perceptions of procedural fairness developed as a consequence of the individual's increasing control over the decision-making process (Thibaut and Walker, 1978). The present findings suggest that an opportunity to express one's views or opinions *per se*, even if only to an intermediate superior who may or may not present these opinions to the ultimate decision-maker, may be sufficient to enhance perceptions of procedural fairness and satisfaction (Earley, 1984).

The results are consistent with the Locke et al. (1981) suggestion that the influence of participatory versus assigned goal-setting procedures on performance lies, in part, in the fact that participative procedures convey greater information to the individual relevant to goal attainment. Subjects in the low downward, high upward flow condition did not differ from subjects in the low flow conditions on performance in the argument production task. As Bazerman (1982) has argued, however, only

subjects who are provided an opportunity to exert personal control and an opportunity to obtain information requisite for effective utilization of that control should demonstrate improved performance. Performance quality among subjects in the high downward, high upward flow condition was higher than all other groups, providing support for a control congruence explanation of motivational effects of knowledge on performance like that proposed by Bazerman. These results suggest that participative goal-setting procedures that incorporate a mechanism for downward flow of task-relevant information should enhance performance relative to assigned goal-setting procedures, but that such benefits may not be seen with procedures providing only upward information flow.

The effect of previous information exchange on subsequent task performance indicates that the establishment of a downward flow of information from the supervisor to the subject can continue to exert a positive effect on unrelated task performance. This finding is of special interest because it suggests that participatory procedures need not always include constant information exchange in order to increase performance. It may be that the individual's initial experience with the evaluation procedure is sufficient to maintain motivation on subsequent tasks. One possible explanation for these results is that a downward flow of information early in a series of evaluative procedures leads to the development of higher performance expectancies or goals. It is important to note that performance on

the argument production and product uses task were not similar - the information provided by the supervisor to assist in performance on the argument production task was not relevant to the product uses task. The possible function of this procedural component on performance motivation, to raise the overall level of performance expectancies, clearly warrants further examination.

In summary, the present study provides evidence to distinguish the influence of upward and downward information exchanges on attitudes and performance. Evaluation procedures that incorporate both upward and downward information flow facilitate task performance in the evaluation context and on subsequent tasks. However, evaluation procedures that allowed for individual input but constrained the individual's ability to make use of input opportunities by not providing for a downward exchange of information did not improve performance more than was demonstrated under low input procedures. The opportunity for upward exchange of information consistently enhanced perceptions of procedural fairness and satisfaction, independent of the outcome of the evaluation. These findings suggest that organizations implementing participatory components in performance evaluation procedures should pay careful attention to the methods by which participation is enacted. While enhancing the downward flow of information might increase performance competencies, failure to simultaneously increase the upward flow of information may lead to employee dissatisfaction with the procedure and supervisor. In contrast,

strengthening the upward exchange of information is likely to enhance perceptions of procedural fairness and satisfaction but appears to be insufficient alone to improve task performance. Organizational attempts to capture the full benefits of participation should use procedures with information flow in both directions.

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Table 1

Criteria Categories and Attributes Used to Code
Argument Task (Task 1) Responses

<u>Category</u>	<u>Scored Attributes</u>
Name Quality	Simple or common sense Memorable Descriptive Related to product function
Media Choice	Directed to particular consumer Matched to product Wide exposure Low cost Matched to product function
Campaign	Staff support and follow-up Services matched to client need Considers competitors Unique
Miscellaneous	Consider needs of buyers Lead consumers to identify with product

Note: Only arguments that could be matched with one specific category attribute were counted.

Table 2

Attitudinal Dependent Measures and Indices

<u>Index</u>	<u>Questionnaire Items</u>	<u>Reliability</u>
Procedural	How fair is the procedure used to	.92
Fairness	determine which company will receive the contract?	
	How satisfied are you with the procedure used to determine which company will receive the contract?	
	How satisfied are you with the pro- cedure used to evaluate your company's performance?	
Distributive	Do you think you deserved the out-	.70
Fairness	come your company received?	
	To what extent do you accept the decision by the client as fair?	
Satisfaction	To what extent do you trust the	.83
with	company representative to make	
Supervisor	an accurate presentation?	
	To what extent do you consider the representative to be an ally in your effort to win the contract?	
	How satisfied are you that the best arguments will be presented?	

Table 3

Mean Scores for Performance Quality on the
Argument Production Task (Task 1)

Downward Flow	Upward Flow	
	Low	High
Low	4.00	3.55
High	3.96	5.11

Note: Scores are the number of nonredundant arguments produced.

Table 4

ANOVA Summary Tables: Post-Outcome Attitudinal Indices

Procedural Fairness

Source	df	MS	F	p
Downward Flow	1	--	--	--
Upward Flow	1	120.56	22.69	.01
Outcome	1	34.87	6.56	.01
Downward X Upward	1	--	--	--
Error	79	5.13		

Distributive Fairness

Source	df	MS	F	p
Downward Flow	1	19.04	4.25	.04
Upward Flow	1	36.82	8.23	.01
Outcome	1	74.06	16.56	.01
Downward X Upward	1	--	--	--
Error	79	4.48		

Note: No effects other than those reported here approached significance; values are reported only for those effects that approached significance ($p < .05$).

Table 5

Proportion of subjects who indicated willingness to
use the same procedure again

Downward Flow	<u>Upward Flow</u>		χ^2	df	p
	<u>Low</u>	<u>High</u>			
Low	7/23 (30.4)	10/22 (45.5)	1.08	1	.30
High	2/23 (8.7)	12/19 (63.2)	13.89	1	.001

Note: Values in parentheses represent cell percentages.